measured the proboscis of a specimen of Macrosilia cluentius [= Coevius cluentius] from south America in the collections of the British museum, and find it to be nine inches and a quarter long! One from tropical Africa (Macrosilia morgani) [= Xanthopan morgani] is seven inches and a half [...] That such a moth exists in Madagascar may be safely predicted, and naturalists who visit that island should search for it with as much confidence as astronomers searching for the planet Neptune, and I venture to predict they will be equally successful!"

This remark alluded to German astronomer Galle, who had searched for, and found, Neptune, after French mathematician Le Verrier predicted its existence and position, from calculations on the orbit of Uranus, then last known planet of the solar system - a well- known case in the history of sciences, often mentioned for its significance in epistemology.

And the idea of a close relation with the large sphingid of tropical Africa, *Xanthopan morgani* which has a proboscis about 20cm, was quite judicious and prophetic. This "cryptolepidoptere" was actually found and described 41 years after Darwins prediction: it belonged to that very species, but it was a new sub-species, with Rothschild and Jordon named Xanthopan morgani praedicta in 1903, i.e. "predicted",which is fully justified This insect has a wing span of 13 to 15 cm, of the colour of a dead leaf and its proboscis is actually 25 cm (ten inches) long.

History seems to be repeating itself: American entomologist Gene Kirsty, of the Mount St Josephs of Ohio college in cincinnati, rescently made an hypothesis similar to Darwins prediction. Another Madagascar orchid, *Angraecum longicalcar*, has a rostrellum still deeper then that of *A.sesquipedale*: about 16 inches (40 cm). Consequently, Gene Kirsty predicted in the American Entomologist of Winter 1991 the existence of another unknown large in Madagascar, with a proboscis 15 inches (38 cm) long! Let us hope that we will not have to wait 41 years before this new predicted moth will be found...

Front cover Photograph: The star orchid *Angraecum sesquipedale* and the predicted moth *Xanthopan morgani praedicta*. (Copyright Marcel LECOUFLE).

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Of Moose, Men and Monsters.

by Lars Thomas

About 400 km north of Stockholm in Sweden lies a mighty lake. So large in fact, that it just called Storsjon (The great lake). For many years this has been the Swedish equivalent of Loch Ness, the home of a lake monster known as *Storsjoodjuret* (The Great Lake Monster).

On an old runestone on the banks of the lake can be seen, what local legend calls the oldest depiction of the sea-monster. A long dragon-like animal circling the stone, biting its own tail. Although the image is very clear, the connection with the lake-monster is at best far fetched. The animal is probably *Jormungandr*, the Midgard snake of Nordic mythology, which encircled the world.

The story of the Storsjo-monster starts in the 1890's, when a series of reports in local newspapers caught the attention of Dr. Peter Olsson, a local naturalist and science teacher.

Sweden showing Lake Storsjon

He started collecting sightings and studying the monster people claimed they were seeing. The oldest sighting he was able to find was from 1820, but later researchers found stories even older. An old legend, written down by a priest in 1635 tells the story of two trolls creating the monster, which suggests that the creature was well known even then.

In 1894 several wealthy local people made an effort to catch the monster. They had several large traps made, and hired a very experienced Norwegian whaler to catch the animal. The traps, which can be seen at the museum in Ostersund at the lake today, never caught anything, and the whaler spent an entire year at the lake, without even seeing the monster. Since then there has been no further serious attempt to catch the animal, and in 1986 the animal was declared a protected species.

The Storsjomonster is in many ways a typical lake-monster. It has been variously described as looking like an upturned boat, a string of humps, or like an animal with a long thin neck, and a small dog-like or a larger horse-like head. The size varies from 3 to 14 meters according to witnesses.

In two very important aspects, the Storsjo-monster does vary strikingly from other lake monsters. It apparently prefers the very narrow parts of the lake close to the most populated areas, and it has very large, prominent, white or pale ears, compared by some witnesses to sails, fins or bat wings. Not all sightings mention the ears, but those that do are all from late summer, or early autumn. This is a rather strange coincidence. It could, however easily be explained if the lake-monsters with the white ears were swimming moose, and not lake monsters at all.

In late summer and early autumn, the moose antlers are clean of velvet, and look like large, pale fins, sails or bats wings. Most of the local eyewitnesses would probably say, that they know perfectly well what a moose looks like, after all there are plenty of moose in the woods around lake Storsjon. Exactly! What most people don't know, however, is the fact that moose are very strong and powerful swimmers. They can swim several miles. Every now and then an animal will even swim from Sweden to Denmark.

Cat is the only endemic cat species still living in the territory. It is also worth noting that on at least one occasion in our records a natural (rather than artificially contrived) cross-breeding between this species and a domestic cat has taken place, in Hong-Kong.

3. The taxonomy of the species is also controversial. Whilst it was described as *Felis bengalensis* many zoologists place it, and four other species of Asian wild cat in a seperate genus: *Prionailurus*, making the nomenclature for this specis *P.bengalensis*. Richard Green (1991) lists eleven sub-species.

NORTH OF THE BORDER

Scottish News from
Tom Anderson

November 24th 1995 saw the introduction of the deer bill, designed to give a goverment quango compulsary powers to cull red deer, specially hinds.

There has been a massive increase in the herds, now numbering 350,000, the largest figure since 1945. In those days it was due to stalkers being recruited as snipers in the infantry, to-days problems are put down to mis-management. An estimated cull of 100,000 is thought necessary to redress the balance of deer to acreage. The new law would allow all terrain vehicals and helicopters to drive the herds toward the "killing grounds". This was the method used against the mustang herds in the mid-west until public pressure stopped it.Animal concern claim the existing birth control pellet to be both more effective and less contentious.

At present a red stag costs around £800 for the stalk, services of a ghillie etc.

Add on accomodation, transport, clothing, ammunition, air fares (most shooters are foreign) and it is a sizeable industry. If he's successful the shooter pays £300 for the head and the estate keeps the meat, worth £150. The hind, having virtually no trophy value, is worth £90. Mean body weight is down in most herds and in some areas starvation is rife. Only the remoteness from the public view has stopped a national protest. As there is no political mileage involved (how many socialists have rural/highland seats?) the bill would seem to have a free passage to legislation.

Tayside police, convinced by a score of sightings over the last sixteen months, are collating all relevant information to establish a pattern of movements and population. Their wildlife officer said most reports were of a 'Black Panther' type:

"...with all these people phoning in saying they are seeing a large feline (sic), the law of averages means there probably is a large feline (sic)"..

Eh? Ed.)

Examined sheep kills apparently rule out dogs or foxes as:

"Whatever did it had quite a bit of power behind it".

Senior zoology lecturer at Dundee University, Dr. John Reilly, however, is "very sceptical", despite one cat appearing in someone's back garden and another (or perhaps the same animal), seen strolling the Esplanade at Broughty Ferry. No date is obtainable for this last incident, but the only possible for explanation for a big cat to venture into a densely populated built up area like this would be if it heard the seal pups which lie up there in some numbers at low tide. If true this would make an interesting addition to a felid diet.

N.B. Dr. Reilly recently returned from the Congo where he was studying dwarf crocodiles (of which he is inordinately fond) in the course of which he saved the life of a German colleague with an infected foot, using a cigarette lighter and a razor blade.

THE 'PREDICTED' MOTH OF MADAGASCAR : AN ILL-KNOWN SUCCESS OF CRYPTOZOOLOGY.

by

Michel Raynal

Cryptozoology is not only interested in giant unknown animals, as misinformed people (including some cryptozoologists) believe. Of course, living brontosaurs strike our imagination, but little unknown animals should not be neglected (and in fact their existance is often much more likely than these "monsters"). Interestingly, one of the most remarkable victories of a true cryptzoological mind, concerns a very little animal - a moth! - though it is unknown to most cryptozoologists.

In 1862, the famous naturalist Charles Darwin published a book on the evolutionary biology of orchids. *'On the various contrivances by which British and foreign Orchids are fertilised by insects'*. Studying the angraecoids, he remarked that they were pollinisated by specific insects. One of these orchids from Madagascar, *Angraecum sesquipedale*, had nectaries eleven and a half inches long, with only the lower inch and a half filled with nectar. From the structure of this orchid, Darwin "predicted" the existence of an unknown moth:

"It is, however, suprising that any insect should be able to reach the nectar: our English sphinxes have probosces as long as their bodies; but in Madagascar there must be moths with probosces capable of extention to a length of between ten and eleven inches!"

Darwin then made an experiment. He took a cylinder, one-tenth of an inch in diameter, and pushed it down through the cleft of the rostrellum:

"By this means alone I succeeded in each case in withdrawing the pollinia; and it cannot, I think be doubted that a large moth must thus act; namely, by driving its proboscis up to the very base, through the cleft of the rostrellum, so as to reach the extremity of the nectary; and then withdrawing its proboscis with the pollinia attached to it."

This insect would, of course affect the fertilization of the orchid, and Darwin concluded to the survival of this moth from ecological evidence:

"The pollinia would not be withdrawn until some huge moth, with a wonderfully long proboscis, tried to drain the last drop. If such great moths were to become extinct in Madagascar, assuredly the Angraecum would become extinct."

In a letter published in the June 12, 1873, issue of Nature, W.A Forbes asked if readers were aware of such moths in Madagascar, and he proposed an identification:

"They would probably be Sphingidae of some kind, as no other moths would combine sufficent size and length of proboscis"

Herman Muller, in the July 17 issue of the same year, mentioned that his brother had caught in Brazil a sphinx.

"the proboscis of which has a length of about 0.25 metres".

demonstrating that Darwin's moth was not at all impossible.

In the second edition of his book (1877), the 'Father of Natural Selection' remarked:

"This belief of mine has been ridiculed by some entomologists, but we know from Fritz Muller that there is a sphinx-moth in south Brazil which has a proboscis of nearly sufficiant lenght, for when dried it was between ten and eleven inches long. When not protruded it is coiled up into a spiral of at least twenty windings."

Meanwhile, Alfred Russel Wallace, the 'Father of Biogeography', commented at greater length on this orchid in his book *'Contributions To The Theory Of Natural Selection'* (1871), and he came to the same conclusion:

"I may hear mention that some of the large sphinx moths of the tropics have probosces as long as the nectary of Angraecum sesquipedale. I have carfully